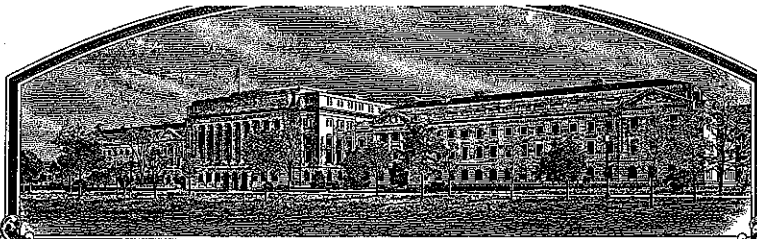


No.

200600174



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

North Carolina State University

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLACEMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE REQUIREMENTS OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PEANUT

'Goliath'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this eleventh day of December, in the year two thousand and six.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

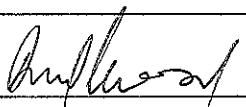
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER(S) North Carolina State University		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME N97053J	3. VARIETY NAME Goliath
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Office of Technology Transfer, Box 8210, N.C. State University, Raleigh, NC 27695-8210, USA		5. TELEPHONE (include area code) (919) 515-7199	FOR OFFICIAL USE ONLY PVPO NUMBER 2006 00 174
		6. FAX (include area code) (919) 515-3773	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) University	8. IF INCORPORATED, GIVE STATE OF INCORPORATION	9. DATE OF INCORPORATION	FILING DATE April 6, 2006
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Roger Crickenberger, Associate Director North Carolina Agricultural Research Service, Box 7643 North Carolina State University Raleigh, NC 27695-7643			FILING AND EXAMINATION FEES: \$ 4,382 - DATE 4/6/06 CERTIFICATION FEE: \$ 768.00 DATE 10/4/2006
11. TELEPHONE (include area code) (919) 515-2717	12. FAX (include area code) (919) 515-7745	13. E-MAIL roger_crickenberger@ncsu.edu	
14. CROP KIND (Common Name) Peanut	16. FAMILY NAME (Botanical) Fabaceae	18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP Arachis hypogaea	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input checked="" type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input type="checkbox"/> NO (If "no", go to item 23) 21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED 22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) David Winwood, Ph.D.		NAME (Please print or type)	
CAPACITY OR TITLE Associate Vice Chancellor, Technology Development and Innovation	DATE 3/17/06	CAPACITY OR TITLE	DATE

(See reverse for instructions and information collection burden statement)

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvpindex.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/sg/seed.htm>.

ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

Seed of Goliath peanut shall be limited to the Foundation, Registered, and Certified generations.

23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

Seed of Goliath has not been sold.

24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Exhibit A

Origin and Breeding History of the Variety

Goliath, tested under the experimental designation N97053J, is an F_5 -derived line selected from cross X90045 made in 1990 using University of Florida breeding line F393-8-1-1-1-1-2 as the female and NCSU breeding line X84001 F2-11-B-B-A06: F09 as the male. F393-8-1-1-1-1-2 was the large-seeded parent of 'NC 7' (4), and it was selected from Florida cross F393, made between F334-3-5-5-1, a sister line of 'Florispán' (1), and Jenkins Jumbo (3), a very large seeded line selected from farmer stock in Georgia. X84001 F2-11-B-B-A06: F09 was an F_5 -derived line selected from the cross of NC 7 with 'Florigiant' (2). F_1 plants of cross X90045 were grown at the Peanut Belt Research Station (PBRS) at Lewiston in Bertie Co., NC in the summer of 1991. Single-seed descent was practiced in the F_2 generation at PBRS in the summer of 1991, in the F_3 generation at PBRS in the summer of 1992, and in the F_4 generation in the greenhouse at the NCSU campus in Raleigh, NC in the summer of 1993. In the winter of 1993-1994, F_5 plants were grown in the greenhouse. $F_{5,6}$ families were planted at PBRS in the summer of 1994. Selection among $F_{5,6}$ families was based on pod and seed size and shape. In all generations subsequent to the F_6 , the family was harvested in bulk. Yield and grade data were first collected in the 1995 Jumbo Selection Test, a two-rep test conducted at PBRS. Subsequent yield trials were conducted at PBRS and the Upper Coastal Plain Research Station (UCPRS) in Edgecombe Co. near Rocky Mount, NC) in 1996, 1997, 1998, 1999, 2000, 2001, 2002, and 2004 in the Jumbo Selection Test series and the Jumbo Pod Advanced test series, each conducted as two-rep tests. The $F_{5,9}$ family was numbered N97053J in 1997. Selection among F_5 -derived families during the replicated testing program was based on a combination of yield, pod and seed size and shape, and grade factors.

Statement of Uniformity and Stability

Goliath was observed over eight (8) generations and was found to be uniform and stable. No variants were observed in Goliath.

References

1. Carver, W.A. 1953. The Florispán Runner peanut variety. Florida Agric. Exp. Sta. Circ. S-62, 4 p.
2. Carver, W.A. 1969. Registration of Florigiant peanuts (Reg. No. 1). Crop Sci. 9: 849-850.
3. Hammons, R.O., and A.J. Norden. 1979. Registration of Jenkins Jumbo peanut (Reg. No. PL-1). Crop Sci. 19: 132.
4. Wynne, J.C., R.W. Mozingo, and D.A. Emery. 1979. Registration of NC 7 peanut (Reg. No. 22). Crop Sci. 19:563.

Exhibit B Statement of Distinctness

The large-seeded virginia-type cultivar to which Goliath is most similar is Gregory. The simplest character that clearly distinguishes Goliath from Gregory is its greater pod and seed size. Mean 100-pod weight, jumbo pod content and 100-seed weight values from 14 two-rep tests conducted from 1997 through 2004 are presented below.

Table 1.

Year	Location [§]	Test [§]	Weight of 100 pods			Jumbo pod content			Weight of 100 seeds		
			Go-liath	Gregory	Difference	Go-liath	Gregory	Difference	Go-liath	Gregory	Difference
			g			%			g		
1997	PBRS	JST	393	263	+130	88.3	75.3	+13.0	138.0	104.0	+34.0
1997	UCPRS	JST	323	270	+53	93.1	73.0	+20.1	136.0	103.0	+33.0
1998	PBRS	JST	378	263	+115	84.2	52.4	+31.8	150.0	97.5	+52.5
1998	UCPRS	JST	385	285	+100	91.6	58.2	+33.4	145.5	95.0	+50.5
1999	UCPRS	JAT	335	298	+38	89.4	85.8	+3.6	118.5	105.5	+13.0
2000	PBRS	JAT	393	298	+95	91.9	67.0	+24.9	128.5	102.0	+26.5
2000	UCPRS	JAT	423	278	+145	96.2	75.0	+21.2	130.0	97.0	+33.0
2001	PBRS	JAT	350	258	+93	86.8	68.8	+18.0	111.6	81.3	+30.3
2001	UCPRS	JAT	330	275	+55	86.4	70.3	+16.1	106.1	79.0	+27.1
2002	PBRS	JAT	334	284	+51	72.9	72.6	+0.3	106.4	93.3	+13.1
2002	PBRS	TAY	333	278	+55	72.9	64.0	+8.9	111.5	89.5	+22.0
2002	UCPRS	JAT	308	288	+20	81.5	66.9	+14.6	104.5	86.5	+18.0
2004	PBRS	JAT	375	273	+103	81.3	62.5	+18.8	127.5	89.5	+38.0
2004	UCPRS	JAT	283	248	+35	76.0	59.9	+16.1	115.5	99.0	+16.5
n			14	14	14	14	14	14	14	14	14
Minimum			283	248	+20	72.9	52.4	0.3	104.5	79.0	13.0
Maximum			423	298	+145	96.2	85.8	33.4	150.0	105.5	52.5
Mean			353	275	+78	85.2	68.0	17.2	123.5	94.4	29.1
SE			10.40	3.89	10.34	1.986	2.25	2.49	4.04	2.23	3.31
t					7.498			6.906			8.783
P> t					<0.0001						<0.0001

[§] All means computed from two-rep incomplete block tests conducted at the Peanut Belt Research Station (PBRS) in Bertie Co. near Lewiston, NC, or at the Upper Coastal Plain Research Station (UCPRS) in Edgecombe Co. near Rocky Mount, NC. Tests included the Jumbo Selection Test (JST), Jumbo Pod Advanced Test (JAT), and Tomato Spotted Wilt Advanced Line Yield Test (TAY). Moisture content of pods and seeds was approximately 7% at the time weights were measured.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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**U.S. DEPARTMENT OF AGRICULTURE Exhibit C
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

**OBJECTIVE DESCRIPTION OF VARIETY
Peanut (*Arachis hypogaea*)**

NAME OF APPLICANT (S) NORTH CAROLINA STATE UNIVERSITY	TEMPORARY OR EXPERIMENTAL DESIGNATION N97053J	VARIETY NAME Goliath
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) Office of Technology Transfer, Box 8210 North Carolina State University Raleigh, NC 27695-8210 USA		FOR OFFICIAL USE ONLY PVPO NUMBER 2006 00 174

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box e.g., or when a number is either 99 or less or 9 or less.

1. BOTANICAL TYPE:

<input type="text" value="1"/>	Flowering on the Main Stem:	1 = Absent	2 = Present
<input type="text" value="1"/>	Branching Pattern:	1 = Alternate – Pairs of vegetative and reproductive branches (Virginia) 2 = Sequential – Continuous reproductive branches (Valencia-Spanish) 3 = Other (Specify) _____	

2. PLANT:

<input type="text" value="2"/>	Habit:	1 = Prostrate (Florunner)	2 = Decumbent (NC-5)	<input type="text" value="3"/>	Branching:	1 = Sparse (Valencia)	2 = Moderate (Starr)
		3 = Semi-Erect (Floripan)	4 = Erect (Starr)			3 = Profuse (Florunner)	

3. MATURITY:

<input type="text" value="1"/>	Region:	1 = Virginia, North Carolina	2 = Southeast United States	3 = Southwest United States	4 = Other
<input type="text" value="1"/> <input type="text" value="6"/> <input type="text" value="0"/>	Number of Days to Maturity				
<input type="text" value="1"/> <input type="text" value="0"/>	Number of Days Earlier Than	<input type="text" value="8"/>	1 = Starr	2 = Florunner	3 = Florigiant
	Number of Days Later Than		4 = Virginia 61R	5 = NC-2	
			6 = NC-5	7 = Southeastern Runner 56-15	
			8 = Other (Specify) <u>NC 7</u>		

4. LEAVES:

<input type="text" value="2"/>	Color at 60 Days (Nickerson Color Designation _____)	1=Light Green (10gy 6/9)
<input type="text" value="5"/> <input type="text" value="8"/>	mm Leaflet length (Basal Leaflet of the Youngest Fully Opened Leaf)	2= Medium Green (2.5G 5/9)
<input type="text" value="2"/> <input type="text" value="8"/>	Leaflet Length/Width Ratio	3=Dark green (5G 4/7)
		4= Other (Specify)

5. POD (Average for 20 pods at maturity): mm Length mm Diameter KG./HA. Pod Yield % Less Than % More Than

1 = Starr 2 = Florunner 3 = Florigiant
 4 = Virginia 61R 5 = NC-2
 6 = NC-5 7 = Southeastern Runner 56-15
 8 = Other (Specify) Gregory

 % Fancy Size: (% riding 13.46 mm., 34/64 Inch, Spacing Set on Presizer Roller) Number of Seeds per Pod: 1 = 1 2 = 2 3 = 3 4 = 3-4 5 = 2-3-4 Constriction: 1 = Shallow or None (Virginia 56R, Argentine) 2 = Medium (Virginia 61R) 3 = Deep (Starr) Surface: 1 = Glabrous (Florunner) 2 = Pubescent (Florispan) Beak: 1 = Absent 2 = Inconspicuous 3 = Pronounced**6. SEED** (Mature, cured but not aged):

Coat Color: 1 = White (Pearl) 2 = Cream 3 = Tan (Starr) 4 = Brown 5 = Pink (Florigiant)
 6 = Red 7 = Purple 8 = Dark Purple 9 = Variegated
 10 = Other (Specify) _____

 Coat Surface: 1 = Smooth 2 = Undented 1 = Uniform Color 2 = Blemished

Shape: 1 = Spheroidal (Starr) 2 = Short Broad (Florunner) 3 = Elongated-Slender (Dixie Runner)
 4 = Cylindrical-tapered Ends 5 = Cylindrical Blunt Ends (NC-2) 6 = Other (Specify) _____

 mm Length mm Width Grams per 100 Seeds (8% Moisture)**7. DISEASE RESISTANCE:** (0 = Not Tested, 1 = Susceptible, 2 = Moderately Susceptible, 3 = Moderately Resistant, 4 = Resistant)

Southern Stem Rot Rust Early Leaf Spot Virus X
 Southern Leaf Spot Mosaic Pod Rot Complex Other (Specify) CBR, Sclerotinia blight, TSWV

8. INSECT RESISTANCE: (0 = Not Tested, 1 = Susceptible, 2 = Moderately Susceptible, 3 = Moderately Resistant, 4 = Resistant)

Thrips Burrowing Bug Leaf Hopper Nematode (Specify species) _____
 Southern Corn Rootworm Lesser Cornstalk Borer Aphid Other (Specify) _____

9. COMPARISON OF SUBMITTED VARIETY WITH ONE OR MORE SIMILAR VARIETIES:

VARIETY	OIL* (% at 0% moisture)	PROTEIN* (%)	OLEIC: * LINOLEIC ACID RATIO	IODINE* NUMBER	SHELLING (%)	SMK** (%)	ELK+ (%)	MAIN STEM HEIGHT (CM)
Submitted	52.9	--	--	--	65.9	63.8	47.9	27.6
Similar	51.9	--	--	--	70.0	67.6	48.2	30.9
Name of Similar Variety	Gregory	--	--	--	Gregory	Gregory	Gregory	Gregory

* From Sound Mature Kernels ** Sound Mature Kernels + Extra Large Kernels

10. INDICATE A VARIETY WHICH MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	VARIETY	CHARACTER	VARIETY
Pod Color	VA 98R (jumbo pods)	Hull Thickness	Not assessed
Seedling Vigor	Not assessed	Seed Size	Gregory
Seed Dormancy	Not assessed	Leaf Color	--

11. COMMENTS: (Additional description or clarification – such as: relative disease reactions may be compared with standard varieties)

Goliath has pods and seeds that are so much larger than those of the largest commercial variety, Gregory, that it cannot be said that they closely resemble each other.

Exhibit D

Optional Supporting Information

'Goliath' is a virginia-type breeding line with very large pods suited to the boiling peanut market. It has alternate branching pattern, runner growth habit, medium green foliage, large seeds with pink testa averaging 1240 mg seed⁻¹, approximately 83% jumbo pods and 9% fancy pods.

Agronomic performance and grade. The salient feature of Goliath is its large pod and seed size (Table 2). The weights of 100 pods or of 100 seeds of Goliath are significantly greater than any other virginia-type cultivar currently available. Compared with Gregory, the cultivar with the largest pods and seeds, pods and seeds of Goliath are approximately 30% heavier (349 vs. 268 g [100 pods]⁻¹, $P < 0.05$, and 123 vs. 95 g [100 seeds]⁻¹, $P < 0.05$).

Dry pod yield of Goliath is inferior to that of most existing cultivars, notably that of Gregory, the cultivar most commonly used by growers of boiling-type peanuts. Sound mature kernel and meat content of Goliath are less than those of Wilson, the existing cultivar with the lowest SMK and meat contents. This low meat content is reflected in low support price and, in conjunction with low yields, in low value per acre when grown for mature, dry pods. However, the large pod size of Goliath makes it desirable for production of immature peanuts for boiling, a market in which bigger pods are preferred by consumers.

Disease reactions. Goliath was selected from a subprogram of selection of very large-seeded lines in the NCSU peanut breeding project, *i.e.*, it was not developed specifically to carry any particular disease resistance. Testing of Goliath's reactions to diseases prevalent in the Virginia-Carolina production area began in 1998.

Resistance to early leafspot. Goliath's reaction to early leafspot was evaluated in 2001 and 2002 in field trials at the Peanut Belt Research Station with no application of leafspot fungicide during the entire season (Table 3). Defoliation was rated on a proportional scale of 1 (no defoliation) to 9 (complete defoliation) in late September or early October each year. Yield was measured on the unsprayed plots. Goliath was not significantly different in defoliation score from any of the currently available cultivars, but the mean for Goliath is based on limited data. It did have significantly more defoliation than the resistant check, GP-NC 343 (5.9 vs. 3.7, $P < 0.05$). Likewise, yield of Goliath in the absence of chemical control was not significantly different from that of any of the currently available cultivars, but it was less than that of GP-NC 343 (2499 vs. 3655 lb A⁻¹, $P < 0.05$). Goliath should be considered susceptible to early leafspot.

Resistance to *Cylindrocladium* black rot and *Sclerotinia* blight. No data are available on reaction of Goliath to these two soil-borne diseases. Although Goliath was entered in disease trials on infested soil in 2001 and 2002, the trials were so affected by tomato spotted wilt virus in those years that no useful data was acquired.

Field resistance to tomato spotted wilt virus. Goliath's reaction to tomato spotted wilt virus was evaluated in 2001 and 2002 in field trials at the Peanut Belt Research Station in plots planted at 50 cm seed spacing (Table 3). The thin seeding rate and withholding of insecticide from the plots promoted feeding by thrips, the vector of TSWV. Disease reaction to TSWV was measured as the proportion of plants exhibiting foliar symptoms at any time during the season. TSWV incidence in general was high in 2001 and 2002. TSWV incidence in Goliath was not significantly different from that of any currently available cultivar, but it was greater than that in resistant check PI 576636 (0.69 vs 0.32, $P < 0.05$). Goliath should be considered susceptible to TSWV.

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Goliath was developed by employees of NCSU (breeder Thomas G. Isleib; agricultural research specialists Philip W. Rice and Susan C. Copeland, research technicians Roy W. Mozingo II and John B. Graeber).

Table 3. Adjusted means with their standard errors for disease reactions of Goliath, N99080J, and N99085J compared with released cultivars, candidates for release, and resistant checks. Data collected in 2001 and 2002.

Line	Early leafspot				TSWV incidence	Rank
	Defoliation score §	Rank	Yield without control ‡	Rank		
	1 to 9		lb/A			
Goliath	5.91±0.49 ^{cde}	11	2499±303 ^{bcd}	10	0.6867±0.0794 ^{cdef}	9
N99080J	6.07±0.69 ^{bcd}	13	2280±429 ^{bcd}	14	0.8405±0.1123 ^{def}	16
N99085J	5.14±0.49 ^{bc}	3	2929±303 ^{abcd}	5	0.8194±0.0652 ^{ef}	15
NC 7	5.41±0.39 ^{bcd}	7	2779±243 ^{bcd}	7	0.7707±0.0562 ^{def}	12
NC-V 11	7.11±0.39 ^e	16	2020±243 ^e	16	0.6575±0.0459 ^{cde}	6
NC 12C	5.27±0.33 ^{bc}	4	3074±208 ^{abc}	3	0.7612±0.0459 ^{def}	11
Gregory	5.50±0.33 ^{bcd}	9	3034±208 ^{bc}	4	0.5733±0.0358 ^c	3
Perry	5.30±0.33 ^{bc}	5	2416±208 ^{de}	11	0.8005±0.0388 ^{ef}	14
N98003	5.49±0.49 ^{bcd}	8	2802±303 ^{bcd}	6	0.8583±0.0652 ^f	17
N00090ol (7)	5.32±0.49 ^{bcd}	6	2321±303 ^{cde}	13	0.7832±0.0561 ^{def}	13
N00098ol (Gre)	6.18±0.49 ^{cde}	14	2750±303 ^{bcd}	8	0.6626±0.0652 ^{cde}	7
VA-C 92R	5.95±0.39 ^{cde}	12	2721±243 ^{bcd}	9	0.6204±0.0648 ^{cd}	4
VA 98R	6.45±0.33 ^{de}	15	2175±208 ^{de}	15	0.6654±0.0453 ^{cde}	8
Wilson	5.75±0.39 ^{cd}	10	2329±244 ^{de}	12	0.6953±0.0559 ^{cdef}	10
GP-NC 343	3.68±0.33 ^a	1	3655±208 ^a	1	0.6276±0.0865 ^{bcd}	5
N96076L	4.42±0.49 ^{ab}	2	3339±303 ^{ab}	2	0.4489±0.0449 ^{ab}	2
PI 576636	--		--		0.3173±0.0507 ^a	1

§ Defoliation scored in plots receiving no fungicidal spray to control leafspot using a proportional scale with 1 denoting no defoliation to 9 denoting complete defoliation.

‡ Yield measured in plots receiving no fungicidal spray to control leafspot.

a,b,c,d,e,f,g,h Means within a column followed by the same letter are not significantly different ($P<0.05$) by t-test with "a" denoting the best mean (least in the case of defoliation score and disease incidence, greatest in the case of yield).

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S) North Carolina State University	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER N97053J	3. VARIETY NAME Goliath
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) Office of Technology Transfer, Box 8210 N.C. State University, Raleigh, NC 27695-8210 USA	5. TELEPHONE (Include area code) (919) 515-7199	6. FAX (Include area code) (919) 515-3773
7. PVPO NUMBER 2006 00 174		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.

☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.

☒ YES ☐ NO10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

This variety was developed and is owned by North Carolina State University.**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 5 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

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**U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705**

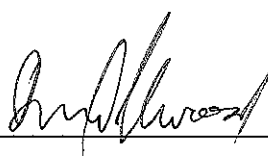
**EXHIBIT F
DECLARATION REGARDING DEPOSIT**

NAME OF OWNER (S) North Carolina State University	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) Office of Technology Transfer, Box 8210 North Carolina State University Raleigh, NC 27695-8210	TEMPORARY OR EXPERIMENTAL DESIGNATION N97053J Variety Name Goliath
NAME OF OWNER REPRESENTATIVE (S) Roger Crickenberger	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) North Carolina Agricultural Research Service, Box 7643 North Carolina State University Raleigh, NC 27695-7643	FOR OFFICIAL USE ONLY PVPD NUMBER 2006 00 174

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Signature

Date



3/17/06

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